AUSTRALIAN SOCIETY of DENTISTRY for CHILDREN

MEMBER ASSOCIATION OF IADC

NEWSLETTER

December, 1985.

The Federal President's Column

-To what Philosophy of treatment in children's dentistry do you subscribe? Minimal treatment modes are taught to undergraduates in some dental schools yet other schools continue to provide clinical teaching in maximum or quantitative philosophy based on traditional modes.

-At recent meetings and seminars there have been divisions on what is necessary to provide basic care to children's teeth. One would think that to provide specialist treatment in children's dentistry prevention would be paramount, yet there is disagreement on the finer points of materials used. Arguments backed by surveys, whether retrospective or not, continue on the reasons for amalgam failures in deciduous molars, a traditional method for restoration. Concurrently, composite resins, or more particularly glass ionomer cements, are shown to have properties preferable to those of amalgam alloys

-A popular discussion point is the permanency or lifetime requirement of restorations of children's teeth. Are stainless steel crowns still necessary? Does interproximal discing result in space loss? One can discuss the development of adequate occlusion, the use of occlusal therapy in children, yet propose restorations with only a semi permanent nature.

-Is the number of appointments a consideration in the restoration and maintenance of deciduous teeth? Do we constantly replace fillings until exfoliation or make cavities 'inactive and self cleansing'? The argument transpires then what is important in operator preferences or patient necessities. The material of choice is dependant on the dentist, not the patient nor, for that matter, on the parents. It would be expected that those who profess knowledge and/or skill in dentistry would perform these capabilities with the utmost dedication and concern for the patient at all times and under all conditions.

-In simple terms, apart from the necessity to continue learning and adapting to new forms of diagnosis and treatment, we can only do our best at the time. No matter what our experience, whichever materials used, and the variety of patient behaviour, the success of providing good patient care to children depends not on only one or two factors but on the multitude of learning experiences in the relationship we have, as individuals, with our patients.

On behalf of the Society officers I wish you all the Compliments of the Season and the New Year.

John Lockwood.

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"Preventive Strategies in a School Dental Service"

(A Summary of a Paper presented to the Tasmanian Branch by Dr.F.Wimmer. **)

In common with most other School Dental Services the Tasmanian School Dental Service, conceived in 1909, as a demand oriented treatment service was formed to deal with actual and perceived unmet treatment needs. The available evidence suggests that Caries rates and the level of attendant problems were higher in Tasmania than in other parts of the Commonwealth, and this situation was exacerbated by a general shortage of dentists and an absence of indigenous dental graduates. The service was in the main occupied with crisis dentistry, for the alleviation of pain and infection, and, where circumstances allowed, with the repair of existing damage. In 1965 the School of Dental Nursing (now Therapy) was established to enable a scheme utilising dental auxiliaries (School Dental Therapists) to provide incremental treatment to the school population to come into operation.

By 1981, with the aid of Commonwealth funding during the period of the Australian School Dental Scheme, the Tasmanian School Dental Service achieved the objectives of full coverage of the primary school population (>85%), and full satisfaction of demand from the secondary school population (>50%).

In 1969 the average annual treatment need per patient was 2.34 restorations and 1.15 extractions. The current pattern of treatment shows an annual requirement of 0.73 fillings and 0.16 extractions, and of these extractions less than 30% are performed for reasons relating to pathology.

In the past decade caries experience in Tasmanian children aged 3 - 14 years has declined by 60%, and the mean caries increment in this segment of the population is currently approximately one tooth surface per child per year.

At the present time, less than 40% of Tasmanian school children from Kindergarten to third year high school have a total of 4 or more teeth (permanent and deciduous) affected by dental caries.

Premature loss of deciduous teeth as measured in 8 year old children has, fallen by more than 90% since 1975.

Dental caries levels, in Tasmanian children, recently the highest in Australia are now among the lowest in the Commonwealth.

Fluoridation has played a major role in this reduction in dental caries, although Tasmania ranks only fourth in the percentage of persons receiving fluoridated water in the states and territories of the Commonwealth. Also, reductions in dental caries of considerable though more modest proportions have been recorded in the non-fluoridated areas of the State during the past ten years.

From the outset, Therapist training in Tasmania was orientated towards a preventive philosophy and considerable emphasis was placed on health education. In service, the one-to-one aspect of health education has been and continues to be the basis of the educational programme but classroom instruction is also considered to be important.

Professionally applied topical fluoride applications were introduced in for all patients in 1970. With the further extension of the fluoridation programme, and continued reduction in caries rates, this Topical fluoridation programme has been modified to include only caries susceptible children. (Dental Therapists are given criteria to enable a basic assessment of individual caries susceptibility to be made). Currently 48% of children treated receive professionally applied topical fluoride.

After-lunch toothbrushing with fluoride toothpaste is also encouraged, and the service assists interested schools in setting up such programmes.

Initially, the traditional six monthly recall interval was employed in the service. However, in the 70's some authors began to suggest that this period was not necessarily the most appropriate in all circumstances. Other workers suggested that shorter recall intervals could lead to the provision of unnecessary fillings.

In 1977, comparison of data for children receiving yearly and twice yearly care showed that the twice yearly treatment group had higher caries scores (DMF, def) than the yearly treatment group, and that the decayed and missing components were essentially the same but that the 'filled' component was higher in the twice yearly treatment group.

From 1978, a yearly recall interval was adopted as the standard for the service. Children considered to be especially at risk from caries were, and are, placed on a 6 month or shorter recall. Currently such children account for approximately 7% of those treated. Since this initiative was introduced treatment requirements, extractions and caries have continued to decline steadily.

There is abundant evidence which suggests that in many cases the progress of dental caries through enamel is slow, and that many early lesions may either remineralize or not progress. In a well controlled situation where children are seen at school at regular and specified intervals, as is the case in Tasmania, a shift away from the "when-in-doubt restore" position in the diagnosis of caries is possible. In these circumstances it is also possible to adopt a non-invasive as opposed to invasive approach to the treatment of the early carious lesion.

A continuing education programme for field dental therapists was begun in 1978. Field therapists in small numbers (groups no larger than 10) attended an on-going series of week-long seminars designed to update their clinical knowledge in the areas of diagnosis and treatment of caries with the object of incorporating these preventive strategies into the field service programme.

Fissure sealants were introduced into the service in 1979 in a clinical trial which showed a retention of $>80\%$ for sealants placed by therapists after three years, with a reduction in caries increment of similar magnitude. Sealants are now placed in susceptible pits and fissures of six year old molars of children up to nine years of age. The current of placement being 30 sealants per 100 children treated. Preliminary data indicate that this programme is likely to be cost effective, and it will be extended soon to include the second permanent molar.

Key principles of the "Atraumatic treatment of the deciduous dentition" as advocated by Professor Graham Craig were incorporated into the programme in 1979, with the aim of reducing the premature loss of deciduous teeth and reducing excessive dental treatment trauma to young children with high susceptibility to dental caries.

While specific scientific studies to assess the individual contribution of all aspects of these preventive strategies have not, to date, been carried, the available evidence suggests that, together with fluoridation they are playing a major role in the incontestable improvement in the oral health of Tasmanian school children which has been recorded over the past ten years.

** Dr. Frank Wimmer. B.D.Sc (Q'ld) D.D.P.H.R.C.S.(Eng.) Epidemiologist,
Tasmanian School Dental Health Service.

FROM THE JOURNALS with John Burrow.

ASSESSMENT AND CLINICAL MANAGEMENT OF EARLY CARIES IN YOUNG ADULTS.

At a time when caries levels appear to be falling and there is an increasing understanding of the nature of the disease,it is important to question ways in which caries is managed in clinical practice.Though the diagnosis of caries is often far removed from being a scientific discipline,a review of the literature indicates that a sizeable proportion of carious lesions do not progress if left alone and those do progress often do so very slowly over a period of years.

The concept of 'looking' for caries with the eyes is very important.It is doubtful whether probing a carious lesion is ever justified.Certainly,whether or not a lesion is sticky on probing is irrelevant to the question of whether or not it is active.If there is no cavitation,such probing achieves nothing,whereas if thereis cavitation,it is rare that the lesion cannot also be seen.Very early approximal cavitation is a possible exception,for such lesions may,indeed,not be visible.

It is generally acknowledged that the bitewing radiograph is the best available method of detecting small approximal lesions.Also a definitive diagnosis of occlusal caries can often be made from a bitewing radiograph once the disease process has spread well into the dentine.

When assessing carious lesions,the crucial issue from the management point of view is not to answer the somewhat academic question'Is there caries?' but to answer the more practical question'Is there active caries?' and if so,'Can it be arrested?'

The management of early carious lesions can be divided into

(1) Non-invasive techniques
  a)waiting and watching
  b)implementig improved home care
  c)applying fluoride or other agents in the surgery
  d)fissure sealing
(2) Invasive techniques
  a)cavity preparation and restoration
  b)Hyatt's prophylactic odontotomy
  c)Bodecker's fissure eradication
  d)rendering the area self cleansing
  e)combination of techniques

As dentists understand more about the shortcomings of restorations,the preservation of enamel and dentine inherent in the non-invasive management of early carious lesions,where possible,becomes increasingly attractive to them.At the same time,the use of a clinical method that does not require local anaesthesia or a dental drill is highly attractive to patients.

(ELDERTON. R.J.Br Dent J1985;158:440)

EFFECT OF RESTORATION THICKNESS AT THE CAVOSURFACE BEVEL ON THE CLASS IV ACID-ETCHED RETAINED COMPOSITE RESIN.

The restoration of fractured anterior teeth has been greatly simplified through the use of the acid-etched technique and new composite resin systems.A recently completed study compared the retention of the restorations with different bevel lengths and a constant bevel depth.It showed that increasing the bevel length beyond 1mm did not increase the retentive strength.This study was designed to compare the effect of different cavosurface bevel thickness with constant bevel length upon strength and retention.

The results indicate that the thickness of the composite resin at the cavity preparation bevel has a significant effect on the retentive strength of the restoration.The addition of a proper lingual bevel should greatly increase retentive strength.

A thicker restoration coverage of the cavosurface margin without overcontouring can only be achieved by a bevel with increased depth.To assure maximum retention,the bevel should prepared as deeply as possible while remaining enamel.This means that the bevel should start at the dentinoenamel junction.

The average thickness of enamel on an incisor is less than 1.5 mm.Therefore, material thicknesses greater than this can only be achieved by slightly overcontouring the restoration.If this is done, it is important to continue the overlap down the facial surface of the tooth to provide a harmonious contour consistent with aesthetics and the health of the gingival tissues

(BAGHERI.J.&DENEHY.G. J.Prosthetic D. Aug.1985. 54:175)

FUTURE OF DENTAL PRACTICE.

A survey of dentists of the U.S.A. and Canada by Clinical Research Associates brought 5125 responses.

The results suggested that dentistry of the future will be oriented towards adults with a decrease in treatment caused by less caries,and that practice will be far more diverse.Treatment needs are changing,but the future looks bright.

Federal Secretary's Report

During the Federal Council Meeting in May in Brisbane two important matters were discussed - Membership and Communication between Branches.

Membership

It was pleasing to be able to report in the last Issue of the Newsletter that the membership has increased during 1985, due no doubt to the nature of the programmes being arranged by the Branches. It is up to all members to ensure that this trend is consolidated.

Communications

Communications could be improved if a Diary of Events for the year can be published. This will become a reality when the Newsletter Editor has received an outline of each Branch's proposed programme for 1986.

Through a Diary interstate visitors can be encouraged to attend meetings and thus to foster good relations and strengthen the Society as a whole. Forward planning for two years ahead is desirable - maybe the appointment of The Branch Secretary for a two year period would facilitate this?

With every Good Wish for Christmas to all members and best wishes to every Branch for a successful year in 1986.

John Keys

(P.S. Please remember that 1986 Dues are due on January 1st.)

NOTES FROM THE BRANCHES.

N.S.W.Branch

Our meeting held on Tuesday 17th Sept. at the Chester Restaurant,Kings Cross was attended by 25 members and visitors who enjoyed the informative and stimulating talk by Periodontist, Dr. Thomas Higgins whose Topic was 'Periodontics for Children'. He spoke of how body surfaces are sites of microbial infection and that teeth are weak link in the skin. He gave us an outline of an approach to periodontal care, which includes the dentist's understanding of periodontal disease, the complete oral examination, discussion of the treatment options, initial therapy and reassessment. The severity of gingivitis during puberty is much higher -this peaks at 12 years of age for girls and at 14 years for boys - progesterone affects the permeability of the gingivae.

Dr.Higgins fascinated his audience with his specialised knowledge which was presented with delightful humour - quite a feat really considering the topic. His down-to-earth approach was certainly appreciated by all attending.

Our next meeting, Tuesday 19th November, to be held at the Glenview Inn & Function Centre, Pacific Highway, St.Leonards is the Annual General Meeting and we are fortunate to have as our guest Dr.Irving Gittleman a Paedodontist in California, here in Sydney on a private visit. He will lead a 'Round Table' discussion on various philosophies of paedodontic treatment. We will have Dr.Richard Widmer, Dr.Keith Powell, Dr. Gordon Hartenstein and Dr. Lorna Mitchell representing Westmead, United Dental Hospitals, Dental Therapy School and Private practice respectively, and members present will be invited to join in the discussion - it promises to be an interesting evening.

Lorna Mitchell

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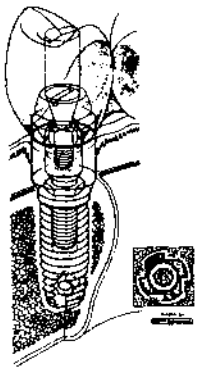
W.A.Branch

The third Scientific meeting for 1985 was held at A.D.A.House, West Perth on 16th October. Our guest for the evening was Associate Professor Patrick Henry. Professor Henry is with the Division of Restorative Dentistry at the University of Western Australia in addition,being in private Specialist practice in West Perth. He presented a superb paper on the system of osseointegrated implants or fixtures he and Oral Surgeon, Dr.Ted Adler, have been providing for the last few years.

The system is the one developed at the University of Gothenberg by Professor Per-Ingvar Branemark. It involves the surgical exposure of the bone of the maxilla or mandible and the threading into holes(produced by extremely gentle methods) of Titanium fixtures. The muco-periosteal flap then is replaced over load-free fixtures for four to six months while healing occurs, but more importantly, while direct attachment at the cellular level occurs between bone and fixtures. After this time has elapsed the fixtures are re-exposed and the subsequent prosthetic attachments are provided.



The results speak for themselves with a percentage success rate in the high nineties. Professor Henry showed examples of cases in fully or partially edentulous patients where there had been a history of difficulty with conventional prostheses. He showed an example of a maxillo-facial reconstruction following extensive surgery, and another case where an ear prosthesis was attached using the method. He predicted there eventually may be an application for the technique in replacing lost single dental units. One most interesting aspect, is the fact that 'gingival' problems around fixtures are minimal. It seems the absence of soft tissue between bone and fixture means fixture movement does not occur, and it appears this is of significance.

The system is extremely'technique sensitive'. Training programmes are now being established other than in Sweden, and in fact, the first to be held in Australia will be in Perth in December of this year.

The final meeting or the year will be the Annual Dinner at the Sheraton-Perth Hotel. Our guest-of-honour on that occasion will be Professor Louis Landau. Professor Landau was appointed to the Chair of Child Health at the University of Western Australia earlier this year.

Alistair Devlin.

Tasmanian Branch

On 28th September, a most pleasant meeting was held at the Federal Country Club Casino. Our guest Speaker on the occasion was Dr.Frank Wimmer a member of our Branch, who is the Epidemiologist with the Department of Health Services in Tasmania.

Dr.Wimmer spoke on Preventive Strategies of the School Dental Services in Tasmania. These strategies are contributing to better child dental health. He made the point that even though the Department could not claim sole responsibility for improved child dental health, nevertheless there was irrefutable proof that the Department, through the implemention of treatment and preventive strategies, was partly responsible for the considerable changes in improved dental health among the child population in Tasmania.

Dr.Felix Goldschmeid will address our next Branch meeting on 'Treatment of Malocclusion with Removable Appliances'. The date for the next meeting is to be d ermined in the near future.

The Branch offers its best Wishes for a Happy Christmas and an enjoyable year in 1986 to all members of A.S.D.C..

Tien Sanggassurya.

Victorian Branch

Since the last Newsletter, the Branch has held its 8th Annual Convention Day and the last Dinner Meeting for the year.

The Convention Dayn on September 13th, was attended by 42 members and guests. With an overall theme of "Children and Their Injuries" the Topics discussed ranged from 'Diagnosis and Treatment of Traumatic Dental Injuries' to 'Community Response to Child Abuse'. An enjoyable day was enhanced by the surroundings of the Kooyong Lawn Tennis Courts.

The last Dinner Meeting for the year was held in October when Mrs Rosalie Freeman, Dietician in the Adolescent Clinic at Royal Children's Hospital spoke on 'Diabetes and the Adolescent'. The common eating disorders of adolescence, obesity, bulima(binge eating) and anorexia nervosa were outlined, together with their physiological side-effects.

Psycho-social factors affecting teenagers were related to their dietary habits. It was stressed that of all socio-economic factors apertaining to diet in the home, it had been found that the level of maternal education was most significantly associated with the nutritional status of the children. The lengthy question and answer session after the Talk reflected the interest generated in this topic, which is so important to both preventive dentistry and good health.

The Branch had a good year in 1985 with a membership of 75. We look forward to a busy year in 1986.

The Victorian Branch wishes all A.S.D.C. members a Merry Christmas and a happy and satisfying New Year.

Chris Olsen.

Queensland Branch

On October 26th & 27th the Branch held its Annual Clinic Week-end at Greenmount Village Inn, Coolangatta. Guest Speaker for the occasion was Dr.Robin Woods AM who spoke to us on a number of research projects he has carried out in association with conducting his general dental practice in Yass.

Speaking on the infectious nature of Dental Caries Dr.Woods said it has long been established that Caries is an infectious disease. An understanding of its natural history shows that in many respects it behaves as do other infectious diseases, and there is evidence that the disease is endemic. The general principals used to control the disease are consistant with this concept whether the concern is treating a child, and adult, or providing lifelong protection from the disease commencing with ante-natal care.

Dr.Woods considers that Infantile Caries is a definable syndrome. There are a number of symptoms that may help in determining the susceptibility to this condition,and its diagnosis in some instances can be established prior to the occurrence of rampant caries.

He has undertaken an extensive programme of research using urinary fluoride analysis to determine the intake of children and some adults in rural areas depending on rain water. It has given results which have a direct bearing on multiple dietary and water fluoride sources. The principles of fluoride supplements was discussed and he also outlined dose regimens based on the research he had carried out.

Dr.Woods also spoke on Premedication for children. The principles of premedication for several conditions were discussed. These conditions included 'the prevention of infective endocarditis' and 'of infectious conditions arising from dental treatment of children who have a compromised immune system'. The principles of premedication for sedation and its indications were presented, and the general principles for the use of drugs such as local anaesthetics and analgesics were discussed.

At the Branch's Annual General Meeting the following Office Bearers for 1986 were appointed :-

President: Dr.Kerod Hallett
Sec./Treas: Dr Bill Whittle
Comm'tee Person: Dr.Arch Defteros.

Keith Sanders.

S.A.Branch.

Since the last Issue of the Newsletter the Branch has held two regular and one Special meetings.

The Special meeting was held in July, to take advantage of a visit to Adelaide by Professor Tony Hargreaves, Professor and Director of Graduate Studies and Research at the University of Alberta, Edmonton, Alberta., who was in Adelaide as 'Visiting Overseas Lecturer' to the University of Adelaide at the Dental School.

Professor Hargreaves discussed 'fluoride supplements','enamel hypoplasia','trauma to deciduous teeth' and 'the future of Paedodontics'. There was a stimulating question time and discussion - a most enjoyable evening was experienced.

We were very grateful to Professor Hargreaves for giving up some of his limited free time to meet with and talk to our group.

At our regular meeting in August, held at the University Club, our Guest Speaker was Dr.Lester Duthy an Orthodontist in private practice in Adelaide, who is an expert in Clinical Dental Photography.

Dr.Duthy gave us a most interesting and informative Talk, with many hints on 'type of camera','film','techniques' and 'developing'. He made good use of slides to illustrate the points he was making. At the conclusion of the meeting there was no doubt that most of those present had gained much useful information and that, by applying it, the quality of Clinical slides will be much improved. It was a very interesting evening enjoyed by all.

The Branch's Annual General Meeting was held on October 22nd at the University Club. After the A.G.M. we enjoyed an excellent dinner and following this an an interesting Talk on 'Treatment of Cleft Lip and Palate'presented by one of our members Dr.Damian Gallagher, an Orthodontist, who is a Visiting Specialist at the Adelaide Children's Hospital.

Dr.Gallagher has treated cleft palate patients for some years and is a member of the A.C.H.Cleft Palate Clinic; we felt that he had gleaned the most relevant and interesting aspects in the problems and treatment of cleft palate to date.

The most impressive and pleasing results are now obtained by a Team approach, where at the correct age a cleft palate patient has a bone graft placed in the cleft area just prior to the eruption of the permanent canine tooth, when as well as closing the related cleft the graft later provides the bone support into which the canine tooth erupts. Before this procedure had become possible, these canines were often extracted because they had nowhere to erupt,and the patient was obliged to wear an obturator or denture to replace the missing tooth. It is pleasing that removable appliances are being dispensed with as much as possible and multiple unit bridges replace them whenever possible.

The Team approach has improved the prognosis and, for the Orthodontist, facilitated treatment.

The Office Bearers elected at the Annual General Meeting are to hold office for two years, they are :-

President: Dr. Margaret Evans
Vice Pres: Dr. Fraser Gurling
Sec./Treas: Dr. Vita Luks

Plans are already well on the way for the next Biennial Convention to be held in Adelaide in October 1986.

Our meetings during the year have been most stimulating and the year seems to have passed quickly. Our attempts to involve the Mothers and Babies Health Association in our efforts to disseminate information about Nursing Bottle Caries has not been as successful as we would have wished, it appears that more statistical support is required to gain real progress.

Members of the S.A.Branch extend warmest Seasons Greetings to all our interstate colleagues, and wishes for a happy and prosperous 1986.

Vita Luks